

# **Cranberry Situation**

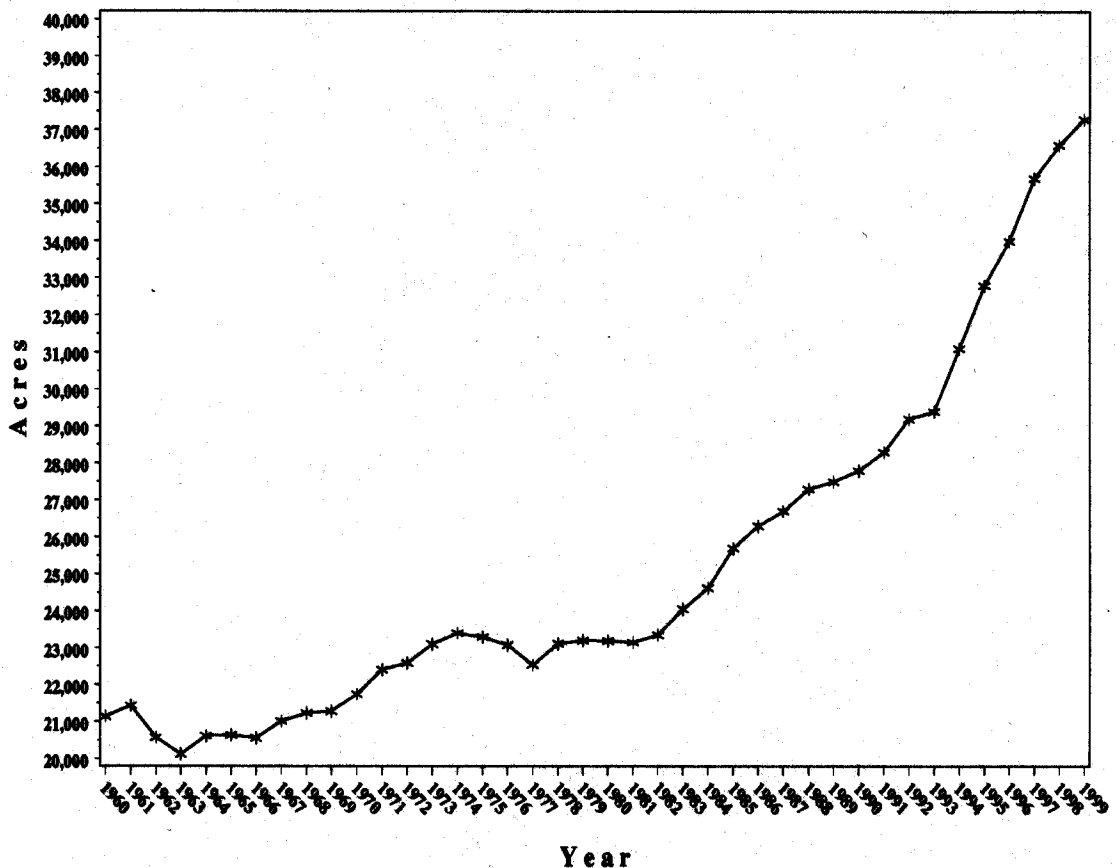
## **Crop Statistics, Graphs, Tables, and Discussion**

**Kevin Kesecker, Economist  
Economic Analysis and Program Planning Branch  
Fruit and Vegetable Programs, AMS, USDA  
November 27, 2000**

- ❖ The views presented in this paper are those of the author and do not represent USDA's positions and views.

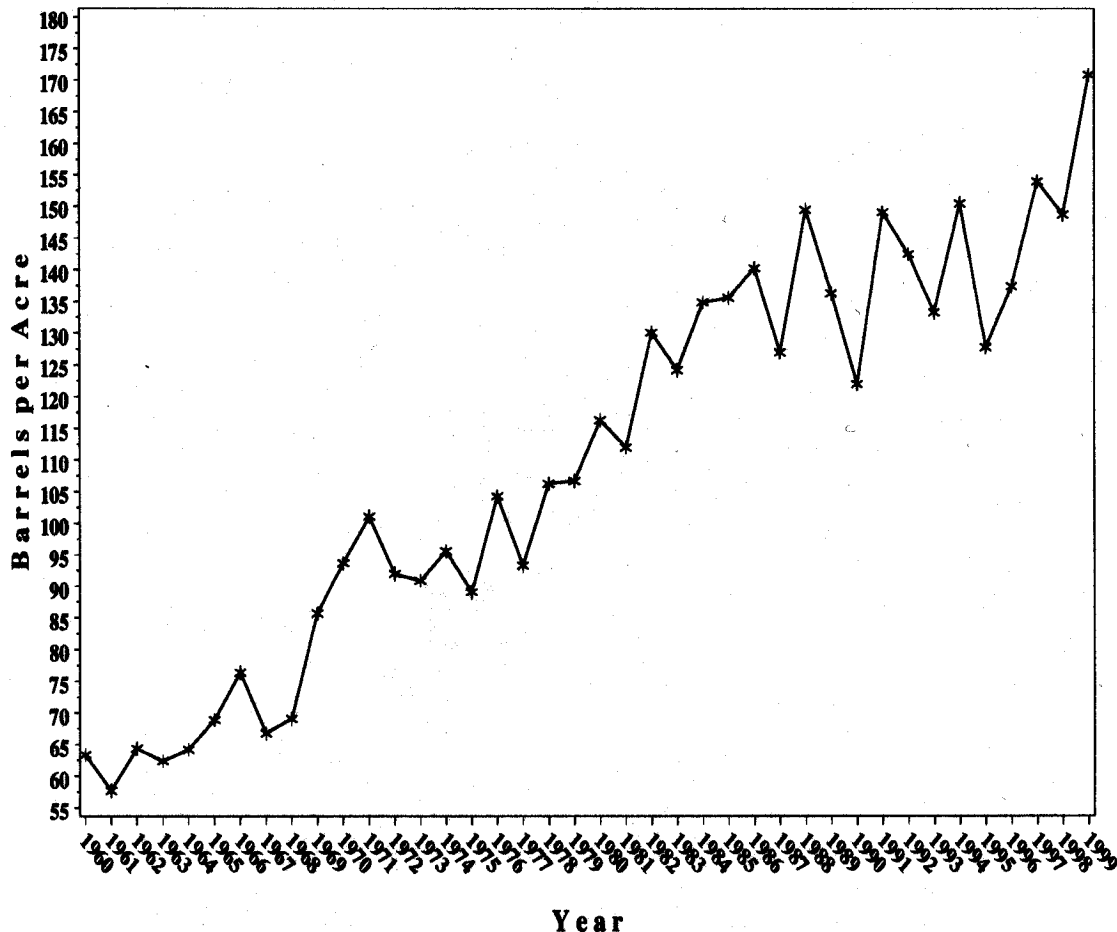
## Acres Harvested

**Figure 1: Cranberries: Area Harvested  
1960 - 1999**



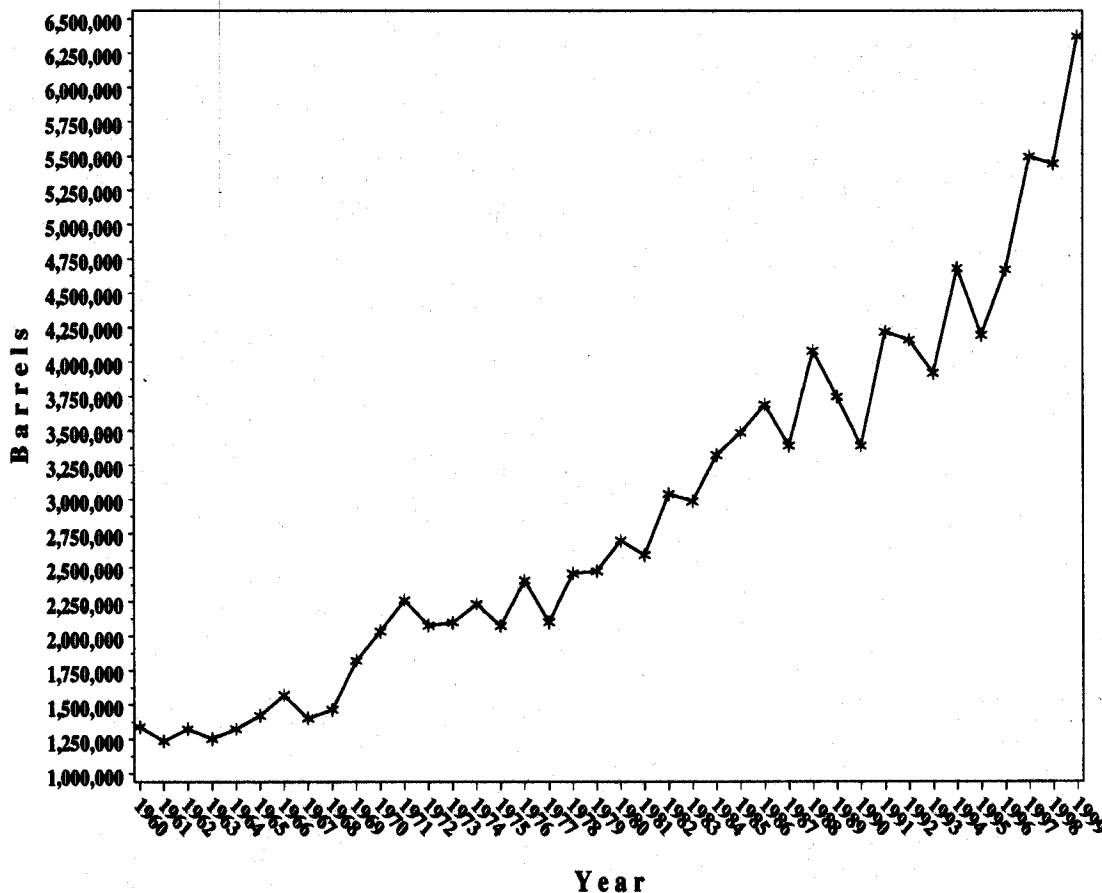
- Acres harvested provide some insight into the productive capacity of the cranberry industry.
- From 1960 through 1999, acres harvested increased by 76% (21,140 to 37,300).
- From 1994 through 1997, acres harvested increased each year by over 1,000 acres (1,700 acres in 1994, 1995, and 1997).
- From 1998 to 1999, acres harvested continued to increase.

**Figure 2: Cranberries: Yields  
1960 - 1999**



- Increases in yields and acres harvested have combined to increase the productive capacity of the cranberry industry.
- The 1999 crop year resulted in the highest average overall industry yield recorded by the cranberry industry. Average yields in the U.S were reported to be 170.9 barrels per acre. This is 16.9 barrels greater than the 1997 yield of 154.0 barrels per acre. WI in particular had a very productive crop year where yields increased from 174.1 to 228.8 barrels per acre.
- From 1960 through 1999, yields increased by 196%.

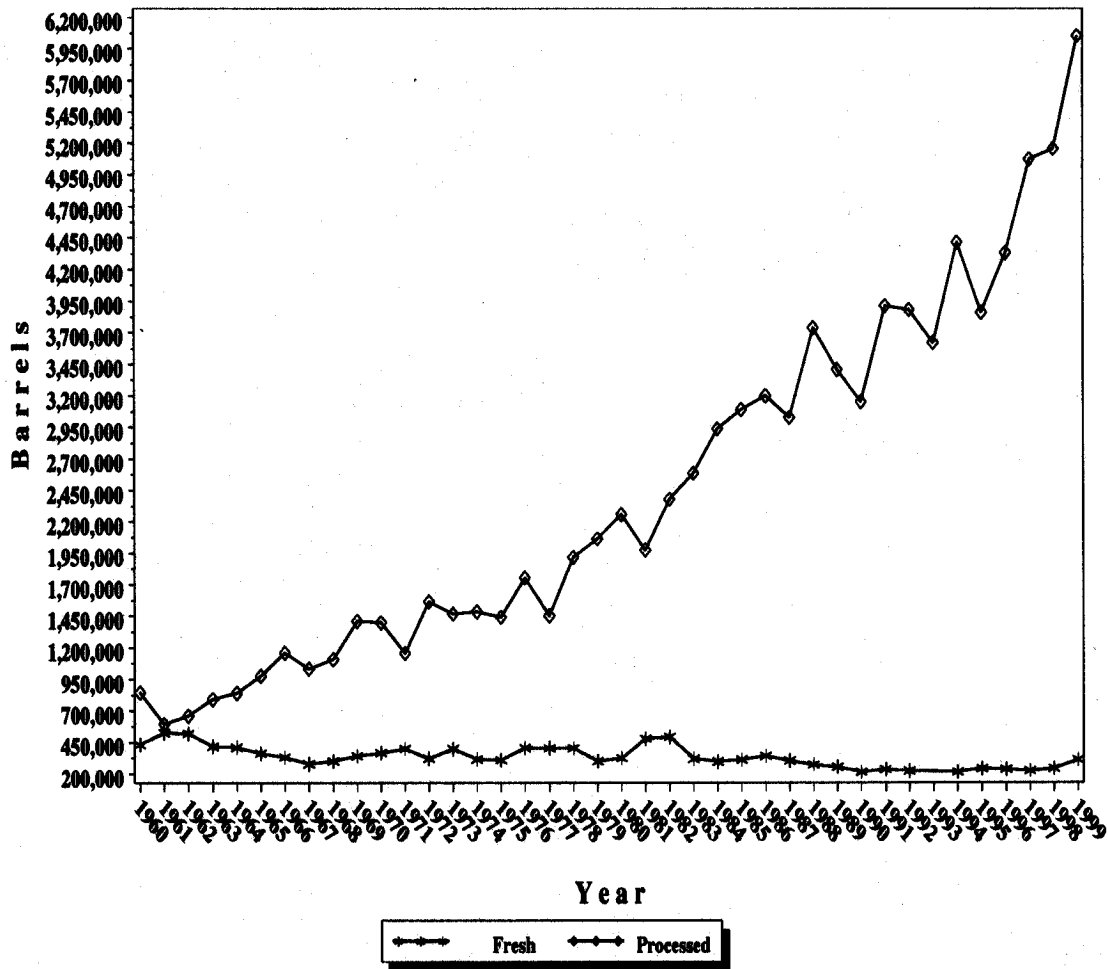
**Figure 3: Cranberries: Production  
1960 - 1999**



- The production of cranberries continues to increase. The 1999 crop year produced a record level of production at 6,373,000 barrels of cranberries. This is a 17% increase over the 1998 production, which was the second highest level of production to date.
- Increasing acres harvested and yields have resulted in higher levels of production.
- From 1960 through 1999 production has increased by 375%.
- With the number of new acres which are just becoming productive, production levels can be expected to continue to increase in the foreseeable future.
- Industry sources indicate that new acres for 1997 through 1999 are 6,463. Does this mean that production will increase by approximately 15% or more? And, will production exceed 7.3 million barrels soon?

## Fresh and Processed Shipments

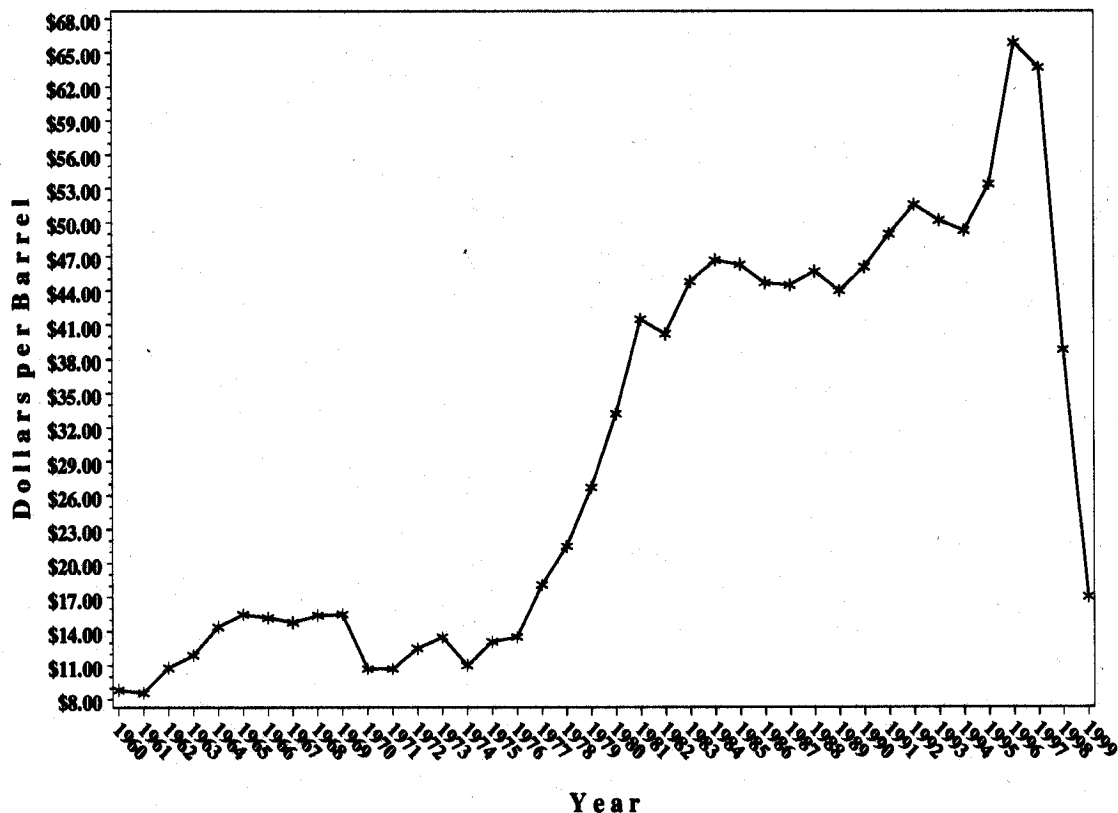
**Figure 4: Cranberries - Shipments to Fresh and Processed Outlets  
1960 - 1999**



- Shipments for processing continued to increase. In 1999, shipments to processors increased to 6,054,000 barrels. This was a 17% increase over the 1998 deliveries. These deliveries are in excess of demand. Total processed sales in 1999 were 5,256,631 barrels (domestic processed sales of 4,395,560 barrels and export sales of 861,071 barrels).
- Fresh deliveries increased to 311,000 barrels. This is the highest level since 1985.

## Prices

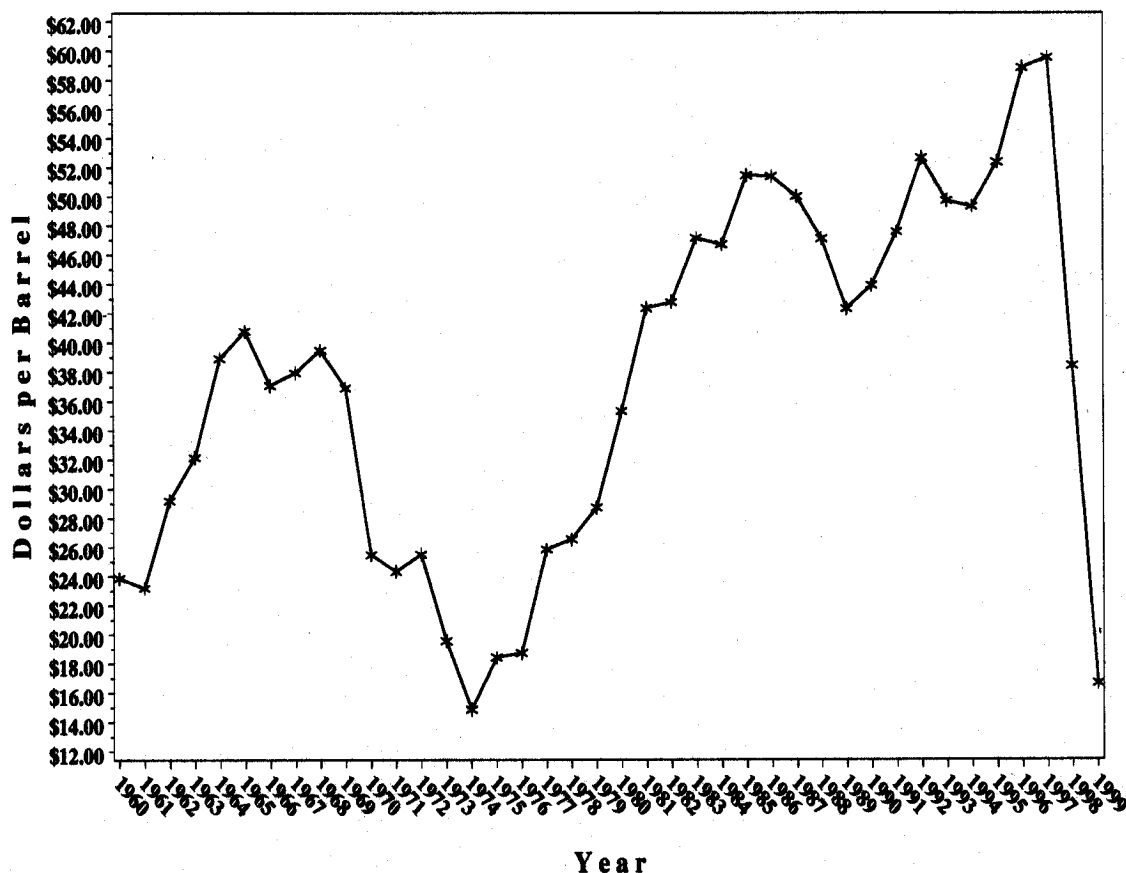
**Figure 5: Cranberries - Prices  
1960 - 1999**



Prices are weighted average of co-op and independent sales

- While acres harvested, yields, and production increased to record highs, prices continue to plummet for the third consecutive year.
- From 1974 through 1996, prices trended up, increasing by 499%.
- Beginning in 1997, prices started to decrease. From 1996 to 1999, prices have decreased by 74%.
- Prices for cranberries sent to processing have returned to levels similar to 1977.
- 2000 crop year prices are expected to decrease to the \$10-15 range and possibly lower.
- The period of increasing price levels provided an incentive for producers to expand planted acres and to increase yields.

**Figure 6: Cranberries - Real Prices  
1960 - 1999**

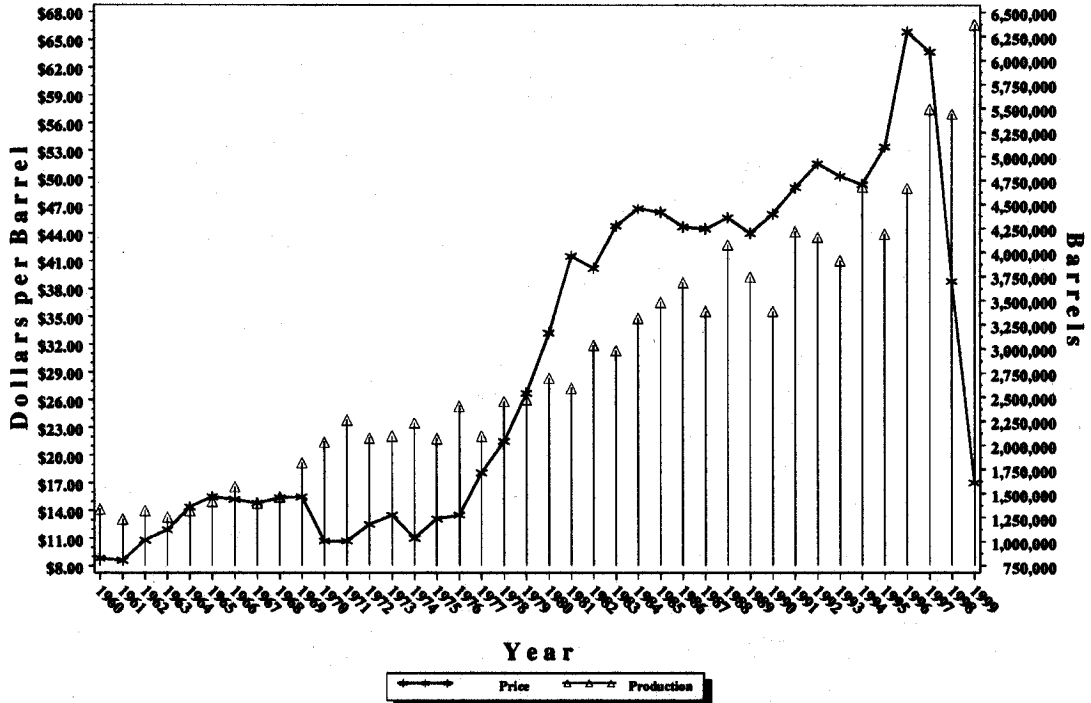


Prices are deflated by the Prices Received by Farmers All Fruits and Nuts Index (1990-92=100)

- Figure 6 shows the “real” prices of cranberries from 1975 through 1999. Real prices are derived by deflating the actual (nominal) prices by a price index (Prices Received by Farmers All Fruits and Nuts Index, 1990-92=100). Real prices have the effects of inflation removed from the price series. Real prices show whether there has been any change in a commodity’s price behavior absence the effects of inflation.
- Examining the real prices in Figure 6 shows that the 1999 prices are the second lowest real price (1974 real price is the lowest).
- Real prices during the 1960’s and the early part of the 1970’s are greater than the 1999 real price. This indicates how far real prices have fallen in just two crop years.

## Prices and Production

**Figure 7: Cranberries: Production and Prices**  
Crop Years: 1960 - 1999

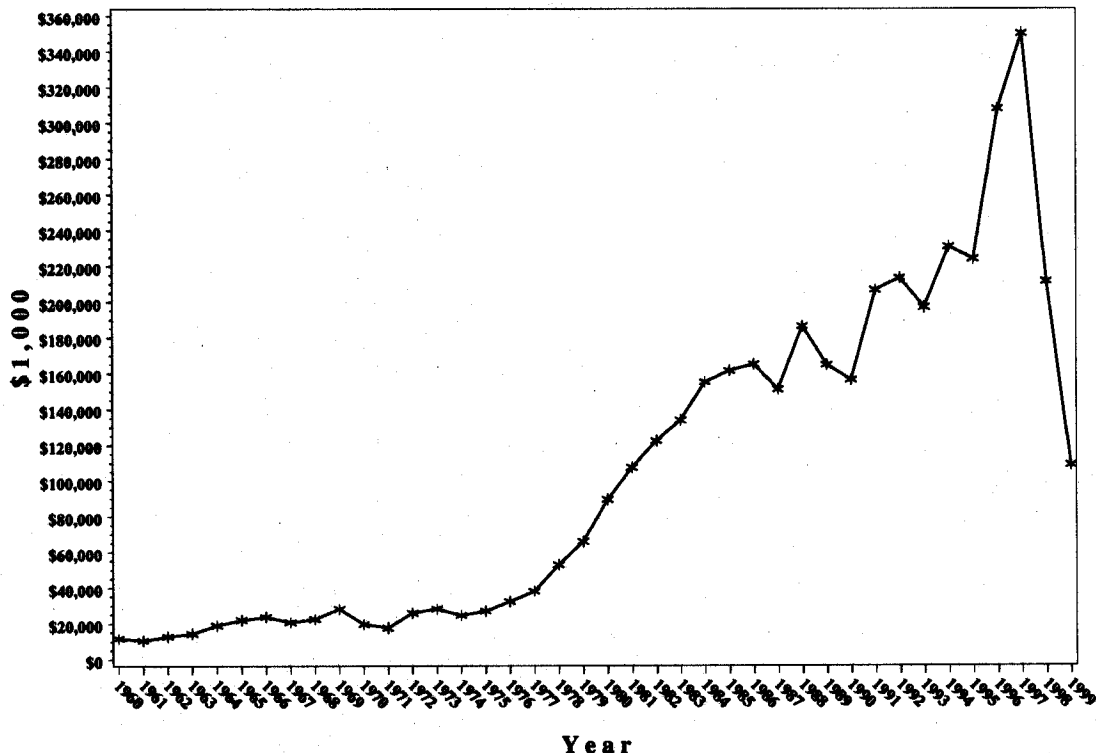


- Figure 7 shows the puzzling relationship between production and prices. With most agricultural commodities there is a pronounced inverse relationship between production and prices. When production is high, prices are generally low and when production is low, prices are generally high.
- From 1960 through 1996, prices and production are positively correlated (the correlation coefficient is 0.93). However, beginning in 1997, as production continued to increase, prices started to decline and continued to decline as production increased in crop years 1998 and 1999. Starting in 1996, supply began to outpace demand and this disequilibrium ultimately resulted in declining prices.



## Value of Production

**Figure 8: Cranberries: Value of Production  
1960 - 1999**



- Figure 8 shows the value of production from 1960 through 1999. This graph shows the dramatic increase in the value of production peaking in 1997 at \$350 million.
- Since 1997, the industry has lost 69% of its revenue. In 1999, the value of production was reported at \$108.6 million.
- The value of production in 1999 is similar to the value of production in 1981 when production was at 2.6 million barrels and prices were at \$41.50 per barrel.

Per Capita Consumption

Table 1: Per Capita Consumption of Cranberries  
Crop Years: 1988 - 1999

Year	Domestic Processed Sales Barrels	Domestic Fresh Sales Barrels	Population 1,000s	Per Capita Consumption Processed Pounds	Per Capita Consumption Fresh Pounds
1988	3,693,561	253,597	246,378	1.50	0.10
1989	3,433,799	234,210	248,827	1.38	0.09
1990	3,665,882	164,998	251,588	1.46	0.07
1991	4,173,095	173,861	254,231	1.64	0.07
1992	3,755,315	204,648	257,051	1.46	0.08
1993	3,878,172	210,090	259,598	1.49	0.08
1994	4,461,657	230,850	262,075	1.70	0.09
1995	4,161,843	216,558	264,486	1.57	0.08
1996	4,071,969	213,542	267,007	1.53	0.08
1997	4,370,168	203,591	269,536	1.62	0.08
1998	4,251,469	205,014	271,987	1.56	0.08
1999	4,395,560	217,012	274,423	1.60	0.08

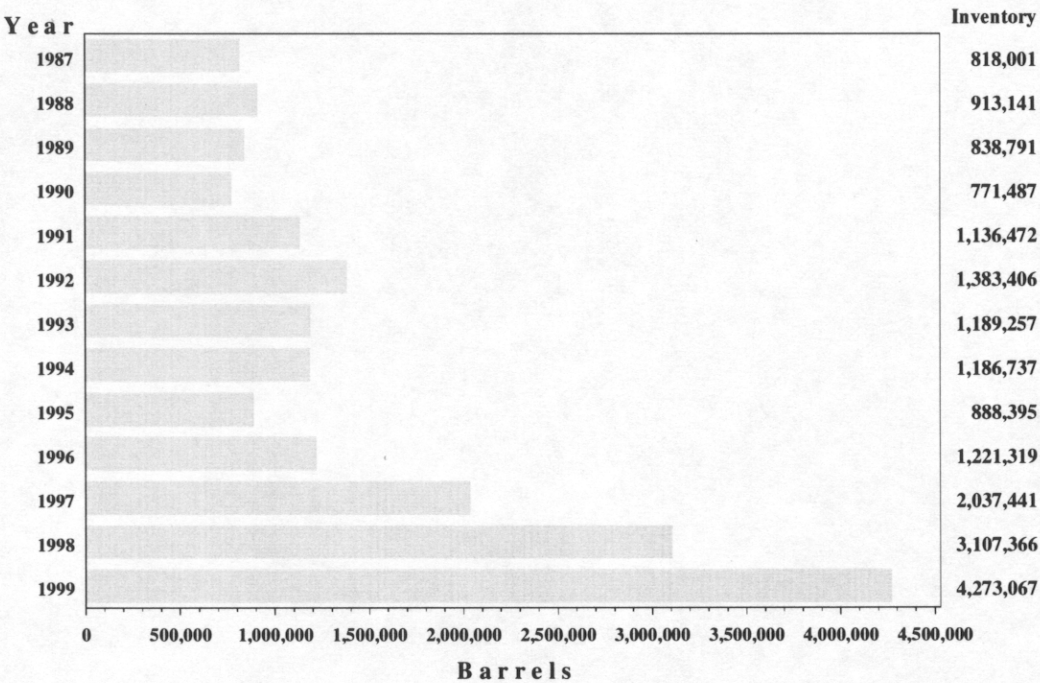
- Table 1 shows the per capita consumption of processed and fresh cranberries. Domestic processed sales and domestic fresh sales were provided by the Cranberry Marketing Committee.
- This tables shows that domestic processed sales increased by 144,091 barrels in 1999. This is a 3.4% increase over 1998 domestic processed sales. This resulted in per capita consumption of processed cranberries increasing to 1.60 pounds per year. 1999 domestic processed sales and per capita consumption are very similar to 1997.
- Per capita consumption of fresh cranberries is very stable at 0.08 pounds per year.
- Average per capita consumption of processed cranberries is 1.54 over these 12 years from 1988 through 1999.
- With the slowdown in the sales of carbonated drinks, the cranberry industry needs to move from being producers to marketers. There appears to be real opportunities for juices and juice blended drinks which can promote nutritional benefits to consumers (so called “nutraceutical” drinks).
- However, with anticipated production levels at approximately 6,500,000 barrels, of which 320,000 barrels are delivered to fresh markets and 1 million barrels exported, per capita consumption would have to increase to 1.87 pounds per year for the industry to reach a supply and demand equilibrium (assuming population to grow by 1%). This is not an easy task in the highly competitive beverage industry.

## **Exports**

- The Cranberry Marketing Committee shows that the growth in exports has been in the processed sales categories. In 1999, exports of processed products reached a high of 861,071 barrels.
- As with most agricultural commodities, the growth of the cranberry industry's sales may depend upon how successful the industry is in building and maintaining export markets.
- In 1988, export sales of processed cranberry products represented 1.3% of total sales. In 1999, this had increased to 16% of total sales.
- Processed sales in export markets may exceed 1 million barrels for the first time in the industry during the 2000 crop year.

# Ending Inventories

Figure 9: Cranberry Season Ending Inventories  
1987 - 1999



Source: Cranberry Marketing Committee

- Figure 9 shows the season ending inventories from 1987 through 1999. In many agricultural industries, some modest levels of inventories are believed to be desirable in situations of a late harvest or a disastrous production year. From 1987 through 1996, season-ending inventories as a percent of production ranged from 21 to 33 percent. Beginning with the 1997 crop year, season-ending inventories were in excess of 2 million barrels and ending inventories as a percent of production increased to 37%, 57% in 1998, and 67% in 1999.
- For the 2000 crop year, the industry has beginning inventories of 4,273,067 barrels. This indicates how far supply is outpacing demand.
- The excessive inventories, beginning in 1997, have resulted in prices paid to growers dropping dramatically.
- As long as inventories remain excessive, prices paid to growers can be expected to continue to decrease and to remain at low levels.
- Even with the volume control program, inventories may be expected to remain excessive unless demand is sufficiently stimulated.

## Comments

- Dramatic production increases, increasing yields, stagnant processed sales, and increasing levels of unsold inventories are exerting downward pressure on producer prices and the value of production.
- Currently, producer prices are less than the cost of production reported to be around \$35 per barrel.
- For the 2000 crop year, the industry used its supply control provisions under the Federal marketing order. The industry decided to use a producer allotment program where producer allotments set the maximum amount that a producer can sell off the farm. Allotments are based on historical sales levels, which determine an aggregate quota and quotas for individual producers.
- A marketable quantity of 5.468 million barrels and an allotment of 85 percent were established for the 2000 crop year. This means that growers can deliver up to 85% of their sales history for processing.
- With the exemption of fresh cranberries and with yields down slightly due to weather and horticultural practices this season, the marketing order is not resulting in a large amount of fruit being destroyed.
- However, supplies are expected to slightly exceed demand for this crop year. And, unsold inventories are expected to remain at excessive levels. A significant purchase by USDA would help reduce the amount of excessive inventories held by handlers.
- The domestic processing market for cranberry juice and blended drinks is very competitive within the industry. There is fierce competition for market share within the cranberry industry.
- Competition within the beverage industry is becoming even more competitive and segmented. Coca-Cola Co. and PepsiCo (two of the largest beverage companies) are going head-to-head in the carbonated as well as the non-carbonated beverage categories. Nutrition and health claims are increasingly being used in promotional messages in the beverage category.
- Unless demand for cranberry products can be sufficiently stimulated, grower prices will remain low.
- With low grower prices (possibly less than variable costs) and with the expectation of continued low prices, some growers may be forced out of business. However, experience with other agricultural industries shows that this generally does not result in less acres harvested, but in increased consolidation among growers.